

[COUNSEL LISTED ON NEXT PAGE]

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
EASTERN DIVISION

LOUIS A. COFFELT, JR.,

Plaintiff,

v.

NVIDIA CORP.,
AUTODESK, INC.,
PIXAR,

Defendants.

Case No. 5:16-cv-00457-SJO-KK

**REPLY IN SUPPORT OF
DEFENDANTS' MOTION TO
DISMISS PURSUANT TO FED. R.
CIV. P. 12(b)(6) FOR LACK OF
PATENTABLE SUBJECT
MATTER UNDER 35 U.S.C. § 101**

Date: June 20, 2016
Time: 10:00 a.m.
Courtroom 1, 2nd Floor
Hon. S. James Otero

1 Carmen Lo (280441)
clo@whitecase.com
2 White & Case LLP
3 555 South Flower Street
Suite 2700
4 Los Angeles, CA 90071-2433
5 Telephone: (213) 620-7832
Facsimile: (213) 452-2329

6
7 Jason Xu, *pro hac vice*
jxu@whitecase.com
8 White & Case LLP
9 701 Thirteenth Street, NW
Washington D.C. 20005
10 Telephone: (202) 626-3615
11 Facsimile: (202) 639-9355

12 Jeannine Yoo Sano (174190)
jsano@whitecase.com
13 White & Case LLP
14 3000 El Camino Real
15 5 Palo Alto Square, 9th Floor
Palo Alto, CA 94306
16 Telephone: (650) 213-0356
17 Facsimile: (650) 213-8158

18 Attorneys for Defendant
19 AUTODESK, INC.

20 Evan Finkel (100673)
21 evan.finkel@pillsburylaw.com
22 Michael S. Horikawa (267014)
michael.horikawa@pillsburylaw.com
23 Pillsbury Winthrop Shaw Pittman LLP
24 725 S. Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
25 Telephone: (213) 488-7307
26 Facsimile: (213) 226-4058

27 Attorneys for Defendant
28 PIXAR

Michael G. Rhodes (116127)
rhodesmg@cooley.com
Cooley LLP
101 California Street, 5th Floor
San Francisco, CA 94111-5800
Telephone: (415) 693-2000
Facsimile: (415) 693-2222

Lowell D. Mead (223989)
lmead@cooley.com
Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Telephone: (650) 843-5000
Facsimile: (650) 849-7400

Attorneys for Defendant
NVIDIA CORPORATION

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

TABLE OF CONTENTS

I. The Claim Elements That Plaintiff Characterizes as “Real Physical Objects” Cannot Confer Patent-Eligibility..... 1

II. The ’710 Patent Claims Do Not Contain Any Inventive Concept.....4

III. Conclusion.....5

TABLE OF AUTHORITIES

Cases

<i>Accenture Global Servs., GmbH v. Guidewire Software, Inc.</i> , 728 F.3d 1336 (Fed. Cir. 2013)	5
<i>Alice Corp. v. CLS Bank Int'l</i> , 134 S. Ct. 2347 (2014)	4
<i>Bilski v. Kappos</i> , 130 S. Ct. 3218 (2010)	2
<i>Content Extraction & Transmission LLC v. Wells Fargo Bank</i> , 776 F.3d 1343 (Fed. Cir. 2014)	1, 4, 5
<i>Digitech Image Techs., LLC v. EFI, Inc.</i> , 758 F.3d 1344 (Fed. Cir. 2014)	2
<i>Enfish, LLC v. Microsoft Corp.</i> , 2016 WL 2756255, at *1 (Fed. Cir. May 12, 2016)	3
<i>Hewlett-Packard Co. v. ServiceNow, Inc.</i> , 2015 WL 1133244, at *1 (N.D. Cal. Mar. 10, 2015)	5
<i>In re TLI Commun's LLC Patent Litig.</i> , Nos. 2015-1372, 1376, 1377, 1378, 1379, 1382-85, 1417, 1419, 1421, 2016 WL 2865693, at *1 (Fed. Cir. May 17, 2016)	1
<i>Intellectual Ventures I LLC v. Capitol One</i> , 792 F.3d 1363 (Fed. Cir. 2015)	3
<i>Intellectual Ventures I LLC v. Erie Indem. Co.</i> , 134 F. Supp. 3d 877 (W.D. Pa. 2015)	3
<i>Internet Pats. Corp. v. Active Network, Inc.</i> , 790 F.3d 1343 (Fed. Cir. 2015)	1
<i>Parker v. Flook</i> , 437 U.S. 584 (1978)	1, 3

Statutes

35 U.S.C. § 101	1
-----------------------	---

Plaintiff argues that the '710 patent is not directed to an abstract idea because "space is a region, and real object, we all exist in," and "[s]pace is not abstract." See, e.g., ECF No. 38 at 2, 3, 5-6, 8-9, 18 (arguing that "a particular steradian region of space" and "a particular steradian radius" are real physical objects). Regardless of whether "space" is a real physical object, the '710 patent claims, which are only directed to method steps for "calculating" a region of space and using a length comparison to derive a color, see '710 patent at 2:66-3:2, remain patent-ineligible as an abstract idea. See, e.g., *Parker v. Flook*, 437 U.S. 584, 597-98 (1978) (claims reciting mathematical algorithm not patent-eligible even though they recite using real world data to derive value for use in real world process of catalytic chemical conversion). Because the '710 patent claims do not contain an inventive concept and do not purport to provide any specific improvement to computer functionality itself, they are patent-ineligible under 35 U.S.C. § 101. See *In re TLI Commun's LLC Patent Litig.*, Nos. 2015-1372, 1376, 1377, 1378, 1379, 1382-85, 1417, 1419, 1421, 2016 WL 2865693, at *3 (Fed. Cir. May 17, 2016) (affirming judgment that patent-in-suit claims nothing more than abstract idea, explaining "not every claim that recites concrete, tangible components escapes the reach of the abstract-idea inquiry"). Thus, Plaintiff's complaint should be dismissed with prejudice for failure to state any claim on which relief may be granted. See *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1349 (Fed. Cir. 2014) (upholding patent-ineligibility determination at pleading stage).

I. The Claim Elements That Plaintiff Characterizes as "Real Physical Objects" Cannot Confer Patent-Eligibility

Rather than view the claims in their entirety, Plaintiff incorrectly focuses on individual claim elements to contend that the '710 patent is not directed to an abstract idea. See *Internet Pats. Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348-49 (Fed. Cir. 2015) ("Under step one of *Mayo/Alice*, the claims are considered

1 in their entirety to ascertain whether their character as a whole is directed to
 2 excluded subject matter.”). Even if “a particular steradian region of space” having
 3 “a particular steradian radius” were to be considered separately in contravention of
 4 the law, *see id.*, these elements still would not take these claims out of the abstract
 5 realm of patent-ineligible mathematical algorithms.¹ *See Bilski v. Kappos*, 130 S.
 6 Ct. 3218, 3223-24, 3231 (2010) (claims that reduce hedging concept to
 7 mathematical formula are not patent-eligible even though they recite real time
 8 entities).

9 The recited “particular steradian region of space” and “particular steradian
 10 radius” are not physical objects, but rather abstract constructs that are
 11 “calculate[ed]” by the claimed mathematical algorithm to compare the length of
 12 two position vectors of an object in a steradian region of space (claim 1, steps 1-9)
 13 to derive pixel color (claim 1, steps 10-11).² *See Digitech Image Techs., LLC v.*
 14 *EFI, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (“a process that employs
 15 mathematical algorithms to manipulate existing information to generate additional
 16 information is not patent eligible.”). These claim elements are part of the method

17
 18 ¹ According to Plaintiff, a “steradian radius” “is an intrinsic component of the
 19 steradian region of space.” *See* ECF No. 38 at 3; Compl. ¶¶ 74-81 (admitting that
 “calculating a particular steradian radius” step is mathematical algorithm).

20 ² While Plaintiff contends that a “steradian” is a “real object” having “a
 21 particular size, particular shape, and particular location,” *see* ECF No. 38 at 3, the
 22 intrinsic record confirms that a “steradian” is a mathematical unit defined by a
 23 **hypothetical** surface area. *See* ECF No. 32 Ex. A, Advisory Action of July 11,
 2013 at 2 (“the ‘steradian’ is a unit that is defined by the **hypothetical spherical**
 24 **surface area** ... a ‘steradian’ is merely a unit that represents solid angle ... the
 25 reference sphere for the purpose of calculating the **steradian space can be drawn at**
 26 **any arbitrary radius**”) (emphasis added). Further, Plaintiff acknowledges that the
 27 ’710 patent describes the size, shape, and location of a “steradian” as “defined by
 28 four vectors,” such as “vectors (6), vector (7), vector (8), and vector (9).” *See* ECF
 No. 38 at 3 (citing ’710 patent at 2:45-50, 3:3-9). Vectors are abstract mathematical
 entities. *See, e.g.*, ’710 patent at 3:15-16 (“vector (6) equals -7.0i+9.0j+11.2k”),
 3:24 (“vector (8) equals -8.0i+8.124j+11.2k”).

steps of “calculating a particular steradian region of space” and “calculating a particular steradian radius of said steradian region of space” within the claimed mathematical algorithm, as illustrated by the specification:³

FIG. 1 shows an example of a particular steradian (5). The following c++ code snippet shows an example of calculating a particular steradian region of space:

```
c++ <[AdotB=(ai*bi+aj*bj+ak*bk)/(lengthA*lengthB);
theta=a cos(AdotB); arcLength=steradianRadius*theta;
columnIndex=arcLength/0.001; AdotB=(ai*di+aj*dj+
ak*dk)/(lengthA*lengthD); theta=a cos(AdotB);
arcLength=steradianRadius*theta; rowIndex=arcLength/
0.001; ]> where 'a' is a position vector (23); 'b' is a vector
```

See Intellectual Ventures I LLC v. Erie Indem. Co., 134 F. Supp. 3d 877, 911 (W.D. Pa. 2015) (“Using mathematical equations or code sequences ... and implementing those code sequences on a generic computer does not make the underlying idea to which the Patent is directed any less abstract.”). Even assuming that using “a particular steradian region of space” and “a particular steradian radius” were to create a superior method as Plaintiff alleges, *see* ECF No. 38 at 4, “a new and presumably better method” of mathematical calculations still constitutes a patent-ineligible abstract idea.⁴ *See Parker*, 437 U.S. at 594-95 (“new and presumably better method for calculating alarm limit values” during catalytic conversion processes are not patent-eligible).

³ *See* ’710 patent at 11:49-57 (highlighting added).

⁴ The claims in *Enfish, LLC v. Microsoft Corp.*, 2016 WL 2756255, at *5 (Fed. Cir. May 12, 2016), recite a self-referential table that improves the way a computer stores and retrieves data in memory, such that “the plain focus of the claims is on an improvement to computer functionality itself.” In contrast, the ’710 patent claims are merely directed to a series of steps for “deriving a pixel color” without any impact on any computer functionality itself. *See* ’710 patent at 1:34-56 (describing purported difference over prior art only in abstract terms, not purporting to make any computer faster or more efficient). Using a generic “computer” to perform steps that “can be done by a human mentally or with a pen and paper,” *see* Office Action of Jan. 31, 2013 at 2, cannot render these claims patent-eligible. *See Intellectual Ventures I LLC v. Capitol One*, 792 F.3d 1363, 1366 (Fed. Cir. 2015) (“An abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment”).

Plaintiff also argues that the PTO's § 101 rejection was "inconclusive" because the Examiner applied the now-obsolete "machine-or-transformation" test. *See* ECF No. 38 at 7. The PTO had encouraged Plaintiff to "specifically set out reasons" if he believed that the rejected claims "are not directed to abstract ideas." *See* Office Action of May 28, 2013 at 3. Instead of identifying any such reason, Plaintiff simply amended the claims to recite a generic "computer" to overcome the PTO's rejection. After the '710 patent issued, however, the Supreme Court made clear that "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *See Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2358 (2014).

II. The '710 Patent Claims Do Not Contain Any Inventive Concept

Plaintiff does not dispute that merely adding a generic "computer" fails to provide any inventive concept but appears to argue that the "particular steradian region of space" having a "particular steradian radius" supplies the inventive concept. *See* ECF No. 38 at 2-3. Steradian regions, however, are a prior art abstraction, not an inventive concept. During prosecution, Plaintiff had cited *Macmillan Ency. of Physics* (ISBN 0-02-897359-3, page 1737) and *McGraw-Hill Ency. of Physics*, 2d ed. (ISBN 0-07-051400-3, page 1493) to the PTO as support to include "steradian" in the claims. *See* ECF No. 32 Ex. A, Patentability Basis of June 6, 2013 at 2. Both of these books date from the 1990's, more than a decade before the filing of the application, showing that the alleged "inventive concept" was publicly known years before the time of the alleged invention.⁵ *See Content*, 776 F.3d at 1348 ("There is no 'inventive concept' in ... well-understood, routine, and conventional activities commonly used in industry").

⁵ As the PTO recognized, "steradian" and "steradian radius" are nothing new. *See* ECF No. 32 Ex. A, Advisory Action of July 11, 2013 at 2 ("Essentially, the 'steradian' is the 3D version of the well-known 2D 'radian' measure. A radian is defined similarly to a steradian, only in 2D space.").

Plaintiff's contention that a "steradian region of space" having a "steradian radius" can be the "inventive step" because these elements allegedly provide "novel results" of "realistic complex 3D shadows" is similarly baseless.⁶ See ECF No. 38 at 4. None of the "[e]vidence of Coffelt's novel results ... provided in the complaint [docket 1], EXHIBIT 3, and EXHIBIT 4" or "Coffelt's program [docket 27]," *see id.*, are part of the '710 patent. The claims make no reference to "realistic complex 3D shadows" and only recite a series of steps for deriving a color of two pixels in the abstract, with no inventive concept. *See Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) (for claim to be patent-eligible, its "inventive concept" must be found in claim itself).

Considering the ordered combination of claim elements, *i.e.*, considering "steradian" and "steradian radius" within their respective "calculating" method steps, still provides no inventive concept. *See, e.g., Content*, 776 F.3d at 1348 ("Applying *Mayo/Alice* step two, we agree with the district court that the asserted patents contain no limitations-- either individually or as an ordered combination-- that transform the claims into a patent-eligible application."). Both method steps are abstract mathematical algorithms that cannot provide the requisite inventive concept. *See Hewlett-Packard*, 2015 WL 1133244, at *6 ("this claim limitation certainly cannot supply an inventive concept to render the abstract idea patent-eligible ... this limitation is in itself an abstract idea, and so is not patentable on its own").

III. Conclusion

Based on the foregoing, Autodesk, Inc., NVIDIA Corp., and Pixar each respectfully requests that the Court dismiss the Complaint, with prejudice.

⁶ Plaintiff's contention is directed to novelty and obviousness rather than the patent-eligibility of the subject matter. *See Hewlett-Packard Co. v. ServiceNow, Inc.*, 2015 WL 1133244, at *10 (N.D. Cal. Mar. 10, 2015) (distinguishing patent-eligibility under § 101 from novelty and obviousness under §§ 102, 103).

1
2 Dated: June 6, 2016

By: /s/ Jason Xu

3 Jason Xu, *pro hac vice*
4 jxu@whitecase.com
White & Case LLP
5 701 Thirteenth Street, NW
6 Washington D.C. 20005
7 Telephone: (202) 626-3615
Facsimile: (202) 639-9355

8 Carmen Lo (280441)
9 clo@whitecase.com
10 White & Case LLP
11 555 South Flower Street
Suite 2700
12 Los Angeles, CA 90071-2433
13 Telephone: (213) 620-7832
Facsimile: (213) 452-2329

14 Jeannine Yoo Sano (174190)
15 jsano@whitecase.com
16 White & Case LLP
3000 El Camino Real
17 5 Palo Alto Square, 9th Floor
18 Palo Alto, CA 94306
19 Telephone: (650) 213-0356
Facsimile: (650) 213-8158

20 Attorneys for Defendant
21 AUTODESK, INC.
22
23
24
25
26
27
28

1 Dated: June 6, 2016

By: /s/ Michael G. Rhodes

2 Michael G. Rhodes (116127)
3 rhodesmg@cooley.com
4 Cooley LLP
5 101 California Street, 5th Floor
6 San Francisco, CA 94111-5800
7 Telephone: (415) 693-2000
8 Facsimile: (415) 693-2222

9 Lowell D. Mead (223989)
10 lmead@cooley.com
11 Cooley LLP
12 3175 Hanover Street
13 Palo Alto, CA 94304
14 Telephone: (650) 843-5000
15 Facsimile: (650) 849-7400

16 Attorneys for Defendant
17 NVIDIA CORPORATION

18 Dated: June 6, 2016

By: /s/ Evan Finkel

19 Evan Finkel (100673)
20 evan.finkel@pillsburylaw.com
21 Michael S. Horikawa (267014)
22 michael.horikawa@pillsburylaw.com
23 Pillsbury Winthrop Shaw Pittman LLP
24 725 S. Figueroa Street, Suite 2800
25 Los Angeles, CA 90017-5406
26 Telephone: (213) 488-7307
27 Facsimile: (213) 226-4058

28 Attorneys for Defendant PIXAR

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of June, 2016, I electronically filed the foregoing document, Reply In Support of Defendants' Motion to Dismiss Pursuant to Fed. R. Civ. P. 12(b)(6) for Lack of Patentable Subject Matter Under 35 U.S.C. § 101, with the Clerk of the Court using the CM/ECF system, which will then send a notification of such filing (NEF) to the following attorneys of record who have consented to accept this Notice as service of this document by electronic means:

Louis A. Coffelt, Jr.
231 E. Allesandro Boulevard, Suite 6A-504
Riverside, CA 92508
Telephone: (951) 790-6086
Email: Louis.Coffelt@gmail.com

By /s/ Jason Xu
Jason Xu